

**QUESTION**  
A 65-year-old male patient with a long history of hypertension and hyperlipidemia presents to the emergency department with a 2-day history of severe, crushing chest pain. The pain is described as a heavy weight on his chest and is exacerbated by exertion. He has a history of smoking 20 cigarettes per day for 30 years. His medical history is significant for a previous myocardial infarction 10 years ago, treated with percutaneous coronary intervention. He is currently on aspirin, beta-blockers, and statins. On arrival, he is diaphoretic and has a heart rate of 110 bpm, blood pressure of 180/100 mmHg, and oxygen saturation of 92% on 2L oxygen. ECG shows ST-segment elevation in leads II, III, and aVF. Troponin I is elevated. The patient is diagnosed with an acute ST-segment elevation myocardial infarction (STEMI).  
**ANSWER**

**1. Initial Assessment and Stabilization:**  
- **ABCs:** Airway is patent, Breathing is adequate, Circulation is stable with a blood pressure of 180/100 mmHg.  
- **Vitals:** Heart rate 110 bpm, Blood pressure 180/100 mmHg, Oxygen saturation 92% on 2L oxygen.  
- **ECG:** ST-segment elevation in leads II, III, and aVF, consistent with an inferior wall MI.  
- **Labs:** Troponin I is elevated, indicating myocardial injury.  
- **History:** Patient has a long history of hypertension and hyperlipidemia, and a previous MI treated with PCI.  
- **Physical Exam:** No murmurs, rales, or lower extremity edema noted.

**2. Diagnostic Workup:**  
- **ECG:** ST-segment elevation in leads II, III, and aVF.  
- **Troponin I:** Elevated, confirming myocardial injury.  
- **ECG and Troponin I:** Confirm the diagnosis of STEMI.  
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**3. Management Plan:**  
- **Primary Percutaneous Coronary Intervention (PPCI):** Indicated for STEMI. The patient is taken to the catheterization laboratory for PPCI.  
- **Medications:** Aspirin, P2Y12 inhibitors (e.g., ticagrelor or prasugrel), and statins are administered.  
- **Supportive Care:** Oxygen, nitroglycerin, and morphine are used for symptom management.  
- **Monitoring:** Continuous ECG monitoring and vital signs are maintained.

**4. Discharge Planning:**  
- **Medications:** Aspirin, beta-blockers, and statins are prescribed.  
- **Lifestyle Modifications:** Smoking cessation, diet, and exercise are recommended.  
- **Follow-up:** The patient is scheduled for a follow-up appointment with a cardiologist.

**5. Summary:**  
The patient is diagnosed with an acute STEMI. The management plan includes PPCI, aspirin, P2Y12 inhibitors, and statins. The patient is discharged with a follow-up appointment with a cardiologist.

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